Indebtedness in the United States, 1929-39

By J. Wulny Sternberg, Chief, Daht Section, National Income Division

DEBTS, as defined comprehensively in this study, consist of obligations-irrespective of form, origin, duration, or ownership-by which debtors contract to make payments of either interest or principal, or both, on stated or determinable dates. They encompass obligations varying from open accounts payable to debts evidenced by formal notes and from debts payable on call to debts of long duration. They include obligations originating from judgments, reorganizations, purchases on credit, and direct loans of funds. By type of obligor, they embrace the debts of individuals, business enterprises, financial institutions, and Government agencies, as well as debt instruments issued and held by issuers or their affiliates. Viewed from the standpoint of purpose, they include debts incurred for either productive, consumptive, or other purposes by individuals, private corporations, governmental units and their agencies.

Economic Significance of Debte.

Under existing methods of finance, when individuals and groups of individuals seek funds beyond those in their possession, they obtain them by borrowing or by selling equities. Except in relatively rare instances, governmental units obtain such funds exclusively by borrowing. Individuals, private corporations, and other private groups commonly elect either to go into debt or to sell stock, a partnership interest, or some other form of equity. The medium employed depends upon a wide range of considerations, relating to such matters as income and risk, by those providing and by those obtaining the funds. Debt obligations are important in the growth of an economy in which savings are high and in which all savings cannot flow into equity investments either because of their institutionalized character or the preference of savers.

Wherever debts are incurred to obtain funds or to satisfy claims, the debts so created may not be adjudged desirable or undesirable until they are analyzed in the light of the circumstances under which they are originated. Similarly, changes in the volume of debt from one period to another must be evaluated in the light of factors which bring about the expansion or contraction. Changes in the volume of total debts outstanding usually result from many diverse movements. Thus, during periods of depression and declining business activity, debts may be reduced by foreclosures, by scaling down debts through corporate

reorganizations, by repayment of obligations through lack of alternative uses of funds, and by similar factors. On the other hand, during similar periods, debts may for a time be incurred by consumers in the acquisition of food, clothing, and other essentials purchased on credit. Individuals may also mortgage their property, thus changing claims on resources from ownership to debt claims. Business enterprises may borrow, if they can find lenders, in order to obtain funds essential to continued operation. Government units may increase their indebtedness for the purpose of building roads, schools, dams, and other public assets which can be built more cheaply in periods of depression and which, at the same time, will provide employment for the jobless.

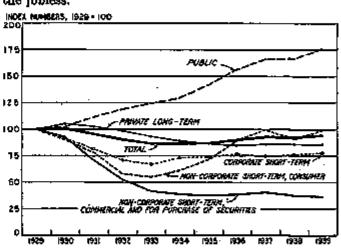


Figure 4.—Indexes of Not Public and Private Debt in the United States, by Classes, 1929-39.

In periods of expansion and prosperity, changes in the aggregate debt volume also represent the net effect of many increases or decreases in various classes of debt and in the obligations of different groups of debt-Some consumers pay off their accumulated debts, while others, in anticipation of continued or expanding earnings, purchase goods on credit. Some individuals use their increased earnings to pay off home mortgages. and others to purchase new homes, borrowing additional funds for this purpose. Some business enterprises retire debts, but many of them borrow funds for expansion of plant and equipment. Increased revenues may permit Government units to retire part of their obligations. Generally, debts tend to expand during periods of increased business activity. This is true because private investments expand during such periods, and debt instruments comprise an important channel for the investment of savings. Also, it is easier for the prosperous than for the distressed to borrow; and debt expansion, therefore, coincides more often with prosperity than with depression.

⁾ The statistics on indebtedness presented in this critic differ in concept and are more extensive in scope than those of earlier studies made by the Department of Commiscos. In this study, debts encompass public and private, hong-term and short-term corporate, individual, and other names portus debt compiled on a net-debt basis. In the scriter studies, the debt statistics were confined to selected cleaves of large-term their obligations, some of which were compiled on gross-dabt and others on not-debt basis.

Debts have played an important role in this country in the formation of productive assets and durable consumer goods. For several decades the development of the railway and public-utility industries has been financed, in a large measure, by the sale of bonds, mortgages, and other evidences of debt. Similarly, residential and commercial real-estate construction has been financed chiefly through bond and mortgage indebtedness. Equity financing has played a relatively more prominent part in the growth of industrial enterprises, but debt securities have also supplied large sums for plant construction and equipment and for operating purposes.

The development of transportation and public-utility facilities and the production of industrial plant and equipment during the 1929-39 decade was much lower than in the preceding decade. Even less was the volume of debt financing, since such industries as railroads. which ordinarily rely mainly on bond and note issues for most of their funds, did little expanding during this period. Industrial enterprises financed much of their plant and equipment expenditures by reinvestment of depreciation reserves and undistributed earnings rather than through the flotation of debt or equity securities. During this period vast resources of investment funds have not been used in the creation of new durable goods, and only a portion of the existing productive capacity of the Nation has been put to use. A considerable proportion of the new indebtedness in recent years has been in the form of obligations of Government units. These debts have been incurred in part in the purchase or construction of essets in the form of buildings, highways, airports, vessels, and other durable goods which serve the general public. They have been incurred also in refinancing farm and urban mortgages previously held by private lenders. This was one of the most significant shifts in the holdings of creditors occurring during the decade. Such transfers did not change the amount of debt owed by end borrowers, but they did reduce the amount owed to private lenders and increased the gross debt of the United States Government and of Federal agencies.

In the utilization of savings, those supplying and those seeking funds are jointly influential in determining whether the funds will flow through equity or debt channels. Many users of capital prefer to share an equity interest in an undertaking rather than assume the more rigid requirements of debt obligations. Many investors are likewise willing to assume the relatively greater rieke of equities in expectation of a greater return. On the other hand, many of those acquiring capital prefer to borrow; and many investors (particularly institutional investors, such as banks and insurance companies), by custom or law, purchase bonds and mortgages which yield fixed returns and presumably provide greater safety of interest and principal. Since debt instruments constitute an important channel for

mobilizing savings for productive uses, increases in volume of business and utilization of resources are accompanied by increases in outstanding debt.

Concepts of Debt.

Debt statistics may be compiled in accordance with various possible concepts, ranging from an inclusive gross-debt aggregate to a net-debt category in which all duplicating and overlapping debt is eliminated. Under a gross-debt concept, the totals encompass all forms and types of debt obligations. In addition to the debts of final borrowers, these totals include the liabilities of intermediaries who assemble the savings of individuals, corporations, and other initial lenders and who in turn make loans directly or through other intermediaries to home owners, businessmen, consumers, and other ultimate borrowers. Any totals compiled in accordance with this concept thus contain debt incurred and recorded at successive stages in the movement of funds from those with savings to those who use the funds for production or consumption purposes. and are without economic significance. Nonetheless, certain categories of duplicating debt which are excluded from the computation of total net debt—such as bank deposits—are of great analytical value.

Since 1938, duplicating debt of monetary financing agencies has expanded appreciably. Bank deposits rose from 38.5 billion dollars at the end of 1933 to 58.3 billion in 1939, which exceeded the 1929 total by 3 billion. Insurance-company liabilities to policyholders and others rose from 22.6 billion dollars in 1933 to 30 billion in 1939, the latter total being approximately 11 billion above that of 1929.

Obligations of banks to depositors and of insurance companies to their policyholders are not commonly regarded as debts, but they fall within the definition of gross debt. They comprise, however, duplication in debt in the sense that the organizations incurring the debts are intermediaries for channeling savings into investment. They are accordingly not included in the net debt totals. Another type of duplicating debt which must be excluded consists of overlapping debt, that is, debt incurred at two or more stages in the performance of a single purpose. Thus, when the Federal Government or a Federal corporation issues bonds, which in turn provide funds to purchase mortgages on households, the overlapping debt of the intermediary agency must be eliminated, leaving only the debts of the end borrower in the net-debt totals.

Obligations of issuers held by them or their affiliates comprising a "system" or "unit" constitute still another class of deductions made in obtaining net debt. The magnitude of the deductions so made depends to a considerable extent on the definition of the term "unit." For private corporations, if the unit consists of a single corporation, then the debt instruments issued and held alive by that corporation comprise the amount deducted

from total issued and outstanding debt of the unit. If the unit is a corporate system, then all the negotiable and nonnegotiable debts of the parent company and its subsidiaries held by any unit within the corporate system are eliminated. Or, if all corporations are conidered as a single unit, then all corporate holdings of evidences of indebtedness of other corporations are deducted from all corporate debt outstanding. For Government units, differences in the amounts deductible also vary in some degree in accordance with the definition given a Government unit. If it consists of a single unit—as, for example, a municipality—then the debt instruments issued and held by it or by its sinking. trust, and investment funds comprise the amounts deductible from its total issued and outstanding debt. If the unit is defined to consist of a State and all its subdivisions, or of all States and their subdivisions, or of the United States Government and its agencies and all States and their subdivisions, then the debt instruments issued and held by divisions within the indicated units comprise the obligations deducted from the total issued and outstanding debts of the units.

Net debt in its most restricted sense consists of those debts remaining after there has been deducted from the obligations of all debtors the debt claims held by them against others. To the extent these claims have direct or indirect claims on assets or resources, they measure the portion of the national wealth over which creditors have direct claims. Changes in the magnitude of net debt relative to changes in total wealth indicate the changing importance of debts in financing the formation of capital. Debt information in its present form does not make it feasible to determine the volume of net debt outstanding as so defined.

The problem of financial strength or weakness associated with debt is not considered in this article. It should be noted, however, that any question of financial soundness involves consideration of the assets held against debts.

Definition of Debt in This Study.

In this article, the debt totals consist of the debte remaining after duplicating debt of intermediaries and debt issued and held within designated units have been eliminated. For private corporations, the unit is the "corporate system" composed of companies bound together by a common management. For governmental bodies, two units are employed. One comprises the United States Government, its corporations and agencies, and the other consists of all State and local governments.

The intermediary financing institutions whose duplicating debts have been excluded are composed of banks, insurance companies, and Federal corporations and agencies. Thus, deductions from Federal corporation and agency debt consist in part of debt incurred as an intermediary and in part of debt held in sinking,

trust, and investment funds. The various types of funds of Federal, State, and local government commonly contain assets in the form of cash, real estate, equities, and the debt obligations of issuers outside of a designated unit. Such assets in the possession of these funds are not deducted, since the deductible items are confined to debt instruments issued and held by members within the unit.

NET INDEBTEDNESS 10 BILLION DOLLARS LESS IN 1939 THAN IN 1939

Net indebtedness in the United States, as defined above, totaled 162.7 billion dollars at the end of 1989. This is 10 billion less than the year-end total of 172.8 billion outstanding in 1929. After remaining unchanged through 1930, total net debt, following somewhat tardily a decline in business activity, fell nearly one-fifth to 149.2 billion in 1933. The large declines in private debt, especially in private short-term debt. much more than offset increases in public debt in these years. In 1934, when the trend of business was upward, the debt aggregate dropped moderately to 148.9 billion, the lowest year-end total for the decade. Further decline after business moved upward resulted principally from delayed reductions in private longterm debt, especially through the termination of corporate receiverships. After 1934, total net debt outstanding showed annual increases to 160.5 billion dollars in 1937, with little change since. Net indebtedness per capits was \$1,230 in 1939, as compared with \$1,409 in 1929, the population having increased 8 percent during the decade.

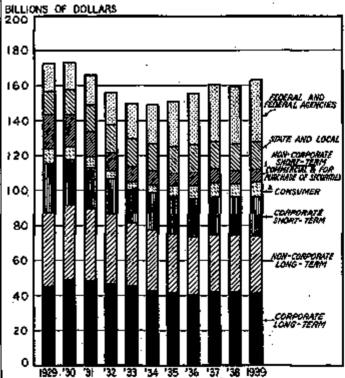


Figure 7.—Net Public and Privace Dobe in the United States, by Classes, 1979-39.

Table 1.—Net Debt in the United States, 1929-39 1 [MURRORS of declars]

Samurants at divisual											
1term	HEH	1980	1941	1942	HB	1934	H25	1030	1991	1930	1935
Grand total public and private debt. Total public debt. Federal and Federal agencies. State and local. Total private debt. Long-torm debt. Corporate. Individual and other noncorporate. Form mortgage Urban real-estate marigage. Short-term debt. Corporate. Individual and other noncorporate. Corporate. Corporate. Corporate. Corporate. Corporate. Corporate. Corporate. Commental and other noncorporate.	28, MAS 14, 706 18, 980 182, 666	173, 001, 29, 514 10, 512 14, 333 148, 477 48, 937 48,	188 994 15 888 48 88 8	156, 682 34, 142 16, 329 171, 306 35, 305 45, 345 36, 328 80, 722 35, 836 10, 606 10, 606		146,871 37,061 32,061 14,388 17,889 42,833 17,889 31,798 31,798 31,796 12,796	150, 963 90, 900 25, 424 15, 979 75, 478 21, 037 26, 104 24, 523 24, 5	146, 508, 46, 280 28, 697 116, 583 170, 446 40, 561 23, 694 7, 380 24, 694 27, 694 21, 621 21,	160, 526 48, 118 32, 786 15, 582 112, 403 42, 686 32, 315 7, 214 25, 601 37, 507 21, 592 16, 115	160, 384 68, 110 32, 834 16, 274 74, 740 62, 643 21, 769 26, 663 21, 669 24, 669 24, 669 24, 669	163, 710 50, 504 35, 221 16, 563 111, 564 111, 504 11, 504 11, 504 12, 534 22, 237 7, 564 22, 237 7, 564 22, 267 7, 564 22, 267 7, 564 22, 267 7, 564 22, 267
Consumer	B, 142	7, 400	W, 870	4,729	4, 437	4,982	6, 800	7, 275	8, 125	7,400	8,066
	Percentages of Total Not Dabt										
Grand total public and private debt. Total public debt. Federal and Federal agencies. Biata and local. Total private debt. Long-tarm debt. Corpurate. Individual and other nancorporate. From mortgage. Urban real-estate mortgage. Short-tarm debt. Corporate. Individual and other noncorporate. Comporate. Octoporate. Individual and other noncorporate. Commercial and for purchase at scourties. Lites. Commercial and for purchase at scourties.	83.2 60.5 26.3	160.0 177.1 8.0 82.0 52.0 28.27 16.5 10.0 16.1 10.5	100 6 100 8 6 6 100 8 6 6 100 8 6 6 100 8 6 6 100 8 6 100 8	100.0 22.11.6 111.6 77.6 36.0 78.3 19.7 19.7 19.7 19.6 8.6 9.6	180 0 24.12 18.29 18.29 18.71 18.71 18.71 18.71 18.71 18.71 19.81 18.71 19.81	100 0 25,284 10,81	100.0 1027.1 10.0 10.0 10.0 10.0 17.0 17.0 17.0 1	100.00 18.00 18.00 17.00 17.00 18.00	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100.0 200.0 200.0 200.0 200.0 200.0 100.0	100, 9 31, 05 31, 05 43, 05 43, 05 43, 05 11, 0 4, 0 4, 0 4, 0
	Percentages of 1973										
Grand total public and private debt. Total public debt. Federal and Federal agencies. State and local. Total private debt. Long-torm debt. Corporate. Individual and other noncorporate. Farm mortgage. Urban real-selata mortgage. Short-term debt. Corporate. Individual and other nancorporate. Compensat. Individual and other nancorporate. Commendat and for purchase of seen- fities. Commendat and for purchase of seen-	100, 0 100, 0 100, 0 100, 0	100.3 97.9 107.5 107.5 108.0 108.0 108.0 108.2 101.3 1	90.30 112.01 108.16 108.10 100.17 100.17 101.13 11.13	90.16.4.6.4.4.7.4.6.2.0.11.6.2.6.2.6.2.6.2.6.2.6.2.6.2.6.2.6.2.	\$64±\$6857688576 05 \$25±\$868576 05 \$25±\$868576 45	######################################	87.4 141.3 141.9 76.5 86.8 80.8 81.3 01.1 47.8 88.8 872.0	90.1 169.1 169.1 170.8 166.3 170.7 165.8 170.7 165.8 170.7 165.8 170.8 1	03.07 100 42 206 42 110 23 12 25 12 26 12 26 14 26 16	99. 2 998. 1 998. 1 77. 8 98. 8 78. 8 78. 8 78. 8 94. 9 96. 9 96. 9	17.5 5 1 2 2 1 7 7 7 7 8 1 4 8 6 7 7 8 9 4 8 6 8 9 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1

A breek-down of the major classes of debt shown in the table, the sources from which the statistics were obtained, and the methods employed in assembling and adjusting the data will be presented in a bulletin to be published later. The debt appropries are, in the main, composed of ladebtedness outstanding at the end of the enlanguage year and, accordingly, are treated as year-end total.

Trend of Public Debt Upward.

Net public debt rose from 28.9 billion dollars in 1929 to 50.8 billion in 1939, an increase of 21.9 billion for the 10-year period. Seven billion dollars, or approximately one-third of this increase, was incurred in the 4-year period from 1929 through 1933. The largest yearly increase occurred in 1936, the year in which the soldiers' bonus was paid, when not public debt increased nearly 5 billion dollars. From 1937 to 1938 it remained unchanged at 48.1 billion. Of the increase of 7 billion from 1929 through 1933, State and local governments, which were active in public works and were assuming the bulk of relief expenditures, accounted for more than 3 billion, or almost one-half the rise in public debt, during this period. From 1933 to 1938 the debts of State and local governments receded elightly, in keeping with reduced outlays for public works and relief. Since 1938 their debts have risen moderately, reflecting the resumption of a somewhat larger share of relief payments.

The net debt of the United States Government and Federal corporations and agencies, treated as a unit in the computation of net debt, rose from 15.7 billion dollars in 1929 to 19.7 billion in 1933. In the 6-year period following 1933 it increased by 15.5 billion to a year-end total of 35.2 billion in 1939. Three factors were mainly responsible for this increase. These were the assumption of the major part of the relief load, enlarged expenditures for national defense, and the expenditure of large sums by direct or indirect outlay for public improvements, such as waterworks, sewage-disposal plants, schools, libraries, and recreation facilities, many of which were financed by State and local governments in earlier years.

The gross-debt totals of the United States Government and its agencies, presented in table 2, contain two types of debt not included in the net-debt totals. Firstly, they contain debt securities of the United States Government issued and held by the United States Government and by Federal trust funds and agencies. The holdings of these funds grew from a comparatively small total of 1,034 million dellars in 1929 to 6,978 million in 1939. Secondly, they contain overlapping

debt incurred by the United States Government and its agencies in obtaining funds to make loans to farmers. home owners, and others, whose debts to these agencies also appear in the totals of their respective classes of debt. As a result, the gross-debt totals contain the sum of the debts incurred at two or more successive stages in bringing together the initial lender and the end-borrower. The extent of such duplication amounted to 1.428 million dollars in 1929. It increased abruptly to 3,751 million in 1933 and to 7,414 million in 1934, when the volume of loans made by the Reconstruction Finance Corporation, the Home Owners' Loan Corporation, and the Farm Credit Administration was particularly large. At the end of 1939 these overlapping debts amounted to 7,750 million dollars.

Of the 41.9 billion dollars of gross debt of the United States Government outstanding as of December 31. 1939, approximately 1 percent comprised matured debt on which interest had ceased and debt bearing no interest; the remainder, amounting to 41.5 billion, consisted of interest-bearing debt. The composition of interestbearing debt (based on duration of the obligations from date of issue) for 1929-39 is shown in figure 8. Throughout the period, long-term debt, consisting of bonds and notes, made up the bulk of United States Government obligations. During the first half of the decade, short-term obligations, consisting of bills and certificates, accounted for as much as one-sixth of all outstanding obligations, but in 1939 this class of indebtedness represented only about 3 percent of the total. In this study all debts of Federal agencies are treated as long-term obligations.

The gross-debt totals of State and local governments contain the amounts of State and local securities held in their sinking, trust, and investment funds. Following a decline from 3.5 billion to 3 billion dollars from 1929 to 1982, the volume of these holdings grew steadily until they reached 4 billion dollars in 1939. Enlarged holdings by retirement, insurance, pension, and other trust and investment funds accounted for about 85 percent of this increase; the remainder resulted from sinking-fund accumulations. A special study of the holdings of these funds revealed that in 1937 they consisted largely of securities of the issuer and other governmental units within a State. Since State and local governments are treated in these computations as a unit separate from the Federal Government, holdings of securities of the Federal Government and its agencies by State and local governments, estimated at 282 million dollars for 1939, are not included in the deductions.

Annual figures showing a break-down of State and local securities into long-term and short-term debt are not available, but a special analysis 2 for the years 1932 and 1937 places State and local short-term debts at 1.7 billion dollars for 1932 and 1.1 billion for 1937.

Since the nature and purpose of the various funds of Federal, State, and local units are not identical, it follows that the propriety of deducting the security holdings of one class of funds in reaching net debt may not apply to other classes. In the case of sinking funds, the security holdings are deducted because they

Table 2.—Gross and Net Public Debt, 1929-39

[Millions of dollars] Item [926 1630 tHI 1007 1943 1874 1935 **##**6 11117 ##38 1849 84,928 18,168 16,801 1,867 16,760 46, 511 37, 094 23, 914 3, 275 18, 517 Federal
Federal agencies
State and local
Duplicating debt:
Total public debt duplications
Federal and Federal agencies
State and local
Not public debt
Federal and Federal agencies
State and local 5,982 2,482 3,620 28,948 15,786

Table 3.—Gross and Net Corporate Debt. 1929-39

[Millions of delibers]

Itein	1523	1030	1931	1912	1997	1934	(935	1830	6127	1848	1999
Gross corporate debt. Long-term Short-term Intercorporate holdings Long-term Short-term Short-term Long-term Short-term Short-term Short-term Short-term	94, 042 16, 886 10, 082 6, 334 78, 026 46, 316	01, 670 69, 760 51, 604 16, 614 10, 882 - 0, 782 78, 086 48, 687 26, 110	80,044 58,014 28,050 10,709 20,587 6,121 77,356 40,027 23,229	81, 088 87, 146 24, 778 14, 778 10, 301 4, 477 67, 316 40, 386	78, 618 65, 410 22, 406 14, 176 6, 266 4, 210 64, 444 19, 180	77, 027 52, 211 24, 710 14, 705 9, 383 4, 522 62, 023 42, 829 21, 004	76, 646 60, 749 25, 796 13, 744 9, 112 4, 652 67, 901 41, 687 21, 164	75,500 16,630 26,570 13,224 8,650 4,065 62,285 10,261	74, 507 50, 784 25, 918 13, 119 6, 609 4, 421 63, 478 42, 680 21, 292	78, 500 60, 400 26, 010 12, 708 8, 447 4, 851 63, 790 42, 043 21, 648	76,000 40,400 26,400 12,440 8,065 4,343 61,335 61,335 22,267

^{&#}x27; Adjusted to a gross-debt or "unconsuldated" hasts and to a nat-debt or "cassolidated" basis from balance-sheet data submitted to the Bureau of Internal Revenue in connection with filing corporate income-inc returns, and, also, in the case of reference, from balance absets filed with the Internated Commerce Commission.

 $^{^{\}pm}$ Securities Exempt From Federal Income Tex, Division of Research and Statistics, Treasury Department,

I Taken from reports of the Scoretary of the Treasury and of the Bureau of the Census, Department of Commerce.

consist almost exclusively of issues originated by the Government unit establishing the fund, and such securities are held practically without exception for current or ultimate retirement, in accordance with provisions of the debt contracts.

Trust and investment funds, comprising for the most part funds established for charities, education, pensions, investments, and other public benefits, differ in some respects from sinking funds in nature and purpose. Some of these funds—as, for example, retirement and pension funds—are subject to large withdrawals, and the accumulation of securities and other assets is for the purpose of providing a means of meeting expected outlays. While the funds are liable to future withdrawals, such liabilities do not arise or exist from the issuance of debtor securities when held by an agency of the issuer, but arise from the legislation creating the retirement or pension systems.

Certain of these funds, as endowments for libraries, hospitals, and schools, provide a source of income without which the functioning of the recipients might be impaired. Here, again, no new or additional net liabilities as such arise from securities issued when held by an agency of the issuer. Securities so held, however, are included in the totals of gross public debt. Many of the funds hold other assets such as real-estate mortgages, bonds and stocks of private corporations, and real estate. These assets are not considered as deductible in obtaining net debt.

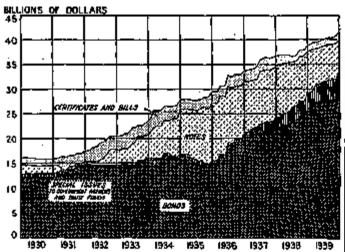


Figure 8.—Composition of Interest-Bearing Debt Outsingding, 1929-39, on Basis of Dally Statement of the U. S. Tressury, Unravised (U. S. Tressury Department).

Private Debt.

223101-40-8

Net private indebtedness, as classified in this study, is composed of the long-term and short-term debts of corporations and of individuals and other noncorporate borrowers. In the main, the short-term debts include only those obligations which have maturity dates of less than I year from date of issue. The short-term

debt obligations of individuals and others are further broken down into debts originated for business and investment purposes and those incurred by the purchase of consumer goods. After remaining relatively stationary slightly above 143 billion dollars from 1929 to 1930, net private indebtedness fell steadily by nearly one-fourth to 110 billion dollars by the end of 1935. Subsequent to 1935, the volume of net private indebtedness rose a little and through 1939 remained approximately one or two billion above the low mark reached in 1935.

In marked contrast with the drop in net private short-term debt, net private long-term debt rose 4.5 billion dollars (from 87.1 billion to 91.6 billion) from 1929 to 1930. At the end of 1931 it was still 2 billion above the 1929 total. A part of this increase was due to the funding of short-term debt incurred to finance construction programs begun before 1930. Beginning in 1931, net private long-term debt began to decline at an accelerated pace. It did not reach its low of 73.4 billion dollars for the decade until 1936—2 years after total net debt had reached its low and 3 years after net private short-term debt had reached its low point for the 10-year period.

One factor, previously mentioned, which delayed the start of the decline, and accelerated the rate of decline when it did occur, is that the debts of corporations in receivership, together with interest accruals on defaulted obligations, are retained in the debt totals until final disposition of them is made by liquidation or reorganization. Since many receiverships were of several years' duration, sizable reductions in corporate debt from this source did not occur until some time after the severe decline in business had been arrested and a reduction in most forms of debt had taken place. The debts of corporations whose receiverships were still pending at the end of 1939 are shown in the debt totals for that year. Although the period of default was typically much shorter, the reduction of farm-mortgage and urban real-estate-mortgage debts of individuals, by adjustment or by foreclosure, also contributed heavily to the decline in long-term debts from 1931 to 1933. Since 1933 a smaller volume of debt reduction arising from foreclosure or adjustment occurred—in part the result of the enactment of legislation enabling farmers and urban home owners to refinance their mortgage indebtedness.

After 1936, net private long-term debts moved in a narrow range and at the end of 1939 stood at 74.3 billion dollars, or 15 percent below the 1929 total. Throughout the period from 1930 to 1939 the demand of corporations and individuals alike for long-term funds, exclusive of refundings, was relatively low. From 1936 to 1939, however, the issuance of new mortgages on urban residential real estate exceeded retirement by nearly three-fourths of a billion dollars.

Private Short-Term Debts.

The volume of net private short-term debt dropped from 56.5 billion to 51.8 billion dellars from 1929 to 1930. Short-term debts, as measured by the volume outstanding at the year end, continued to drop sharply to 31.9 billion by 1933, a decline of 43 percent from 1929, and then rose to 37.5 billion by 1927. After receding moderately in 1938, with a elsekening in business activity, the volume of short-term obligations recovered to the 37.5 billion level at the end of 1939. As would be expected, private short-term debt is shown to be relatively more sensitive than private long-term debt to changes in the volume of business.

Of the three classes of private short-term debts distinguished in this study, those incurred for business or commercial purposes and for the purchase of securities experienced the largest and most sustained decline. Totaling 19.8 billion dollars in 1929, they fell to 7.7 billion in 1934, equal to only 39 percent of their 1929 total, and then continued to recede moderately to a low of 7.2 billion in 1939. One reason for the sharp decline is that these figures contain obligations owed to brokers-obligations which amounted to 5 billion dollars at the end of 1929, as compared with only 908 million dollars for 1989. This class of short-term debts contains also an indeterminable amount owed by individuale to banks on loans, secured by bonds and stocks, incurred for investment, speculative, or other purposes. This type of bank loan was particularly large in 1929 and 1930; but, since they were not segregated from those made for business purposes, it is not possible to apportion the amounts attributable to each.

The volume of debts incurred by the purchase of consumer goods and services, covering both openaccount and installment types of credit financed by the vendor or by banks and financing companies, also declined sharply during the early part of the decade. These obligations, as measured by year-end outstandings, dropped from 8.1 billion dollars in 1929 to 4.4 billion in 1933, or 45 percent. Unlike debts incurred for business and investment purposes, however, these obligations, as responsive to the rise in the volume of business as they had been to the earlier decline, regained their 1929 volume of outstandings during 1937. Without attempting a detailed analysis, it should be noted that while the volume of consumer debts is sensitive to changes in business activity, a lag of several months is typically required before it fully reflects such changes.

Changes in corporate short-term debts, while less pronounced, were also responsive to changes in the volume of business. After the contraction during the declining phase of business activity during the early years of the decade, the total moved higher, though it has never approached the 1929 total.

Gross corporate debts, as presented in table 3, contain, in addition to the securities held by other investors, the obligations issued by holding or subsidiary companies and held by them or their affiliates within a corporate system. Such long-term and short-term holdings declined from 16.4 billion dollars in 1929 to 12.4 billion in 1939. This decrease was traceable mainly to the general reduction in all corporate debt, but in part to a simplification of corporate structure undertaken by many corporate systems during the decade.

Studies relating debt to national income, wealth, interest charges, and a break-down of the broad categories shown in this article will be dealt with in a forth-coming bulletin of the Department of Commercs.